

REMARKS

This is in full and timely response to the non-final Office Action dated June 20, 2005. No new matter has been added. Accordingly, claims 7-19 are presently pending in the application, each of which is believed to be in condition for allowance. Reexamination and reconsideration in light of the present Amendment and the following remarks are respectfully requested.

Claim Rejections- 35 U.S.C. § 102/103

In the Action, claims 7-10 and 12-19 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,948,549 to Takayama et al. ("Takayama '549"). This rejection is respectfully traversed. Claim 11 was rejected under 35 U.S.C. § 103(a) as obvious over Takayama' 549 in view of U.S. Patent No. 6,015,775 ("Takayama'775").

The present application makes it clear that the weight % of the elements used as intermetallic constituents in the sintered material is not equivalent to the volume % of the intermetallic compounds formed from those constituents. The present specification indicates that when the elements Ni and Si are added in the amount of 13.33 wt% (10 wt% Ni and 3.33 wt% Si), a NiSi based intermetallic compound of 10 vol% is formed following the sintering process, and when Ni and Si are added in the amount of 9.33 wt%, a NiSi based intermetallic compound of 6 vol% is formed (page 49, ln. 15-23). In the present invention the intermetallic compounds precipitate into the grain boundaries significantly improving the sliding properties (PV values) of the sintered contact (page 49, ln. 2-12 and Table 4, No. A1, A12, A14, A28, A29 and A30). In contrast, Takayama' 549 does not indicate the volume % of intermetallic compounds formed following the sintering process, which volume % is significantly different than the weight % of the constituents.

Further, in the Action, an embodiment from Takayama' 549 allegedly anticipates the matter of claim 7, "wherein a contact contains elements capable of forming a first intermetallic of NiSi and a second intermetallic of SnMn wherein the total amount of intermetallic compound is 10% by weight (Table 4, Nos. 24-25)". See pg 2 of Action. The elements that the Action is

referring to in Table 4 are Ni (2.0 – 3.0%), Si (1.0%), Mn (1.0%) and the ionic compound SnAt (5%). Claim 7 of the present invention includes the elements Ni, Si, Mn and Sn, but not the compound SnAt, which compound would not give up its Tin (Sn) atom to form an intermetallic compound with Manganese (Mn). Thus, the elements from Takayama'549 that are capable of forming intermetallic compounds of the type described in the present invention constitute a wt% of at most 5.0% (3.0 wt% Ni, 1.0 wt% Si, and 1.0 wt% Mn), and the volume % of any intermetallic compounds formed would likewise be some amount less than 5.0%. Takayama'549 therefore fails to anticipate the claimed range. In the present invention, the maximum improvement in the PV value, when Ni and Si are used as the intermetallic elements, is attained at 9.33 wt% intermetallic (page 49, ln. 2-12), which value is well above the maximum weight % of 5.0% indicated in Takayama'549.

Accordingly, because Takayama'549 fails to disclose, teach or suggest each and every limitation of claim 7, an anticipation rejection has not been established, and withdrawal of this rejection is respectfully requested. In addition, a motivation by Takayama'549 to use the range of intermetallic metal in claim 7 has not been established, and a withdrawal of this rejection is also respectfully requested. Moreover, aside from the novel limitations recited therein, claims 8-19, being dependent either directly or indirectly upon allowable base claim 7, are also allowable at least by virtue of their dependency upon allowable claim 7. Withdrawal of the rejections is therefore courteously solicited

In addition, since neither Takayama'549 nor Takayama'775 provides sufficient motivation for modifying the references in the manner indicated, the applied art is clearly inadequate, resulting in the Action having failed to satisfy the burden of establishing a *prima facie* case of obviousness. Withdrawal of the rejection of claims 7-19 under 35 U.S.C. § 103(a) is therefore courteously solicited.

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Respectfully submitted,

By 

Ronald P. Kananen

Registration No.: 24,104

RADER, FISHMAN & GRAUER PLLC

1233 20th Street, N.W.

Suite 501

Washington, DC 20036

(202) 955-3750

Attorney for Applicant